

IN THE DRAWINGS

The attached sheets of drawings include changes to Figs. 11-13. These sheets, which include Figs. 11-13, replace the original sheets including Figs. 11-13.

Attachment: Replacement Sheets

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-53 are pending in this application. Claims 1-10, 12-21, 22-25, 27, 30, 32-44, 47, 48, and 50-52 are amended by the present amendment.

Amendments to the claims find support in the application as originally filed at least in the specification at page 1, line 22 to page 2, line 4 and page 5, line 24 to page 6, line 3. Thus, no new matter is added.

In the outstanding Office Action, Figures 11-13 were objected to; Claims 8-17, 19-22, 27, 39-42, and 50-53 were objected to; Claims 2, 5, 6, 8-11, 19-22, 24, 27-31, 33, 36, 37, 39-42, 44, 47, 48, and 50-53 were rejected under 35 U.S.C. § 112, second paragraph; Claims 32-42 were rejected under 35 U.S.C. § 101; Claims 1, 2, 4, 12, 13, 15, 23, 24, 32, 33, 35, 43, 44, and 46 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Publication 2004/0136334 to Heiman et al. (hereinafter "Heiman"); Claims 3, 14, 25, 34, and 45 were rejected under 35 U.S.C. § 103(a) as unpatentable over Heiman in view of U.S. Publication 2005/0085249 to Goldstein et al. (hereinafter "Goldstein"); Claims 5, 16, 36, and 47 were rejected under 35 U.S.C. § 103(a) as unpatentable over Heiman in view of U.S. Patent 6,411,662 to Sakoda et al. (hereinafter "Sakoda"); Claims 6, 17, 37, and 48 were rejected under 35 U.S.C. § 103(a) as unpatentable over Heiman in view of U.S. Patent 6,298,227 to Molnar; Claims 7, 18, 26, 38, and 49 were rejected under 35 U.S.C. § 103(a) as unpatentable over Heiman in view of U.S. Publication 2003/0139152 to Doi et al. (hereinafter "Doi"); Claims 8, 19, 27, 39, and 50 were rejected under 35 U.S.C. § 103(a) as unpatentable over Heiman in view of U.S. Publication 2005/0157734 to Li et al. (hereinafter "Li"); and Claims 9-11, 20-22, 28-31, and 51-53 were indicated as allowable if rewritten or amended to overcome the rejections under 35 U.S.C. § 112, second paragraph.

Initially, Applicants gratefully acknowledge the indication of allowability of Claims 9-11, 20-22, 28-31, and 51-53 and the courtesy of an interview with Examiner Yuen on December 9, 2010. During the interview, differences between the claimed invention and references cited in the Office Action were discussed. Examiner Yuen indicated the amendments discussed would overcome the outstanding rejections. Comments and claim amendments discussed during the interview are reiterated below.

Figures 11-13 are amended to include the legend "Background Art." Thus, it is respectfully requested the objection to the drawings be withdrawn.

In addition, Applicants respectfully traverse, in part, the objections to the claims. Applicants respectfully traverse the objection to Claim 12 including the suggestion to add a second colon to the claim. Applicants respectfully submit that a second colon is not necessary and may lead to confusion. However, in the interest of compact prosecution, Claim 12 is reformatted so that the portion after "configured to" continues on the same line. Therefore, it is respectfully requested the objection to Claim 12 be withdrawn.

Further, with regard to the objections noted for Claims 19 and 27, for example, the claims are amended as suggested in the Office Action or similar to the suggestions in the Office Action. Accordingly, it is respectfully requested those objections to the claims also be withdrawn.

In addition, regarding the rejections under 35 U.S.C. § 112, second paragraph, Claims 2, 5, 8, 19, 24, 27, 33, 36, 39, 44, 47, and 50 are amended as suggested in the Office Action or, in light of suggestions in the Office Action. However, Applicants respectfully traverse the rejection of Claim 17.

Claim 17 is directed to the hub apparatus of Claim 12, further comprising, in part, a next remote selecting unit configured to select a next acquisition remote node according to at least one of a round robin algorithm, a least recently used algorithm, and a priority algorithm.

The hub apparatus of Claim 12 also includes a next frequency selecting unit configured to select a next frequency based on an offset frequency of a previous acquisition command. Applicants respectfully traverse the assertion in the Office Action at page 4, last two lines, that it is unclear whether or not the next remote selecting unit and the next frequency selecting unit are interrelated. On the contrary, Claim 17 also recites that “the second acquisition command identifies the next acquisition remote node for acquisition and includes the next frequency.” Thus, Claim 17 clearly indicates that the next acquisition remote node, which is selected by the next remote selecting unit, and the next frequency, which is selected by the next frequency selecting unit, are identified by the second acquisition command. Therefore, it is respectfully submitted that Claim 17 particularly points out and distinctly claims Applicants’ invention.

Accordingly, it is respectfully requested the rejections under 35 U.S.C. § 112, second paragraph, be withdrawn.

Further, with regard to the rejection under 35 U.S.C. § 101, Claims 32 and 39 are amended to recite a non-transitory computer readable medium, as suggested by the outstanding Office Action at page 5, prenumbered paragraph 6. These claims have also been amended to comply with Director Kappos’ memo dated January 27, 2010, which stated that the subject matter eligibility of a computer readable medium may be secured by excluding signal-based embodiments described in the specification. To this end, Applicants have adopted the language “non-transitory” as suggested in the memo to address U.S. Patent and Trademark Office formalities only. More specifically, it is noted that the recitation of “non-transitory” is a limitation of the medium itself (i.e., tangible, not a signal) as opposed to a limitation on data storage persistency (e.g., RAM vs. ROM). Applicants note that the recitation of “non-transitory” in amended Claims 32 and 39 is only intended to exclude a

transitory signal medium from the claimed media. Accordingly, it is respectfully requested the rejection under 35 U.S.C. § 101 be withdrawn.

Applicants respectfully traverse the rejection of Claims 1, 2, 4, 12, 13, 15, 23, 24, 32, 33, 35, 43, 44, and 46 under 35 U.S.C. § 102(e) as anticipated by Heiman, with regard to the amended independent claims.

Amended Claim 12 is directed to a hub apparatus configured to acquire a remote node that is not yet acquired by the hub in a satellite communication network. The hub apparatus includes, in part, an acquisition unit configured to send a first acquisition command to the remote node to acquire the remote node to be added to the network.

Applicants' specification describes that remote nodes in a communication system may be considered to be out of the network, for example, when the remote nodes are powered down, or recently powered up, or for some other reason have lost communication with the network.¹ The process of converting out of network remote nodes to in network remote nodes is known as remote node acquisition, and conventional methods of remote node acquisition have resulted in long delays due to the relatively high latency found, for example in a satellite communication network, or in other high latency communication segments.²

As discussed during the interview, Heiman fails to teach or otherwise suggest each of the features of any of the independent claims. For example, it is respectfully submitted that Heiman fails to teach or suggest acquiring a remote node that is not yet acquired by the hub, or sending an acquisition command from the hub to the remote node to acquire the remote node to be added to the network.

Heiman is directed to providing more efficient utilization of a shared pool of time-frequency slot resources in a return channel of a satellite communication system.³ According

¹ Specification at page 1, last paragraph.

² Specification at page 2, lines 3-5.

³ Heiman at Abstract.

to Heiman, “[t]he return channel resources are shared among the various remote terminals by using TDM or frequency-time domain multiplexing (FTDM)” and a satellite network communication system.⁴ Thus, Heiman notes that the return channel is a limited resource, and to more efficiently manage that limited resource, Heiman proposes a solution that combines reservation-based allocation with the options of random access and/or TDM circuit-switched allocations in a return data channel.⁵ Further, Heiman suggests combining reservation and random access systems with dedicated (at least temporarily), time slots and/or frequencies to circuit-switched access.⁶ Thus, Heiman is directed to more efficient communication for remote terminals that are *already acquired* in a satellite communication system.

However, Applicants respectfully submit Heiman fails to teach or suggest a method of acquiring remote terminals in the first place and also fails to teach or suggest sending an acquisition command to a remote node to acquire the remote node to be added to the communication network. For example, Heiman indicates that “[i]n order for a remote terminal to receive an allocation on the return data channel 205, the remote terminal may make the request for allocation to the hub 105 on the return control channel 210.”⁷ According to the system of Heiman, a hub allocates a portion of a return data channel 205 to a remote terminal in response to a request from the remote. Thus, in this situation described by Heiman, the remote terminal is *already acquired* by of the network as evidenced by the remote terminal’s ability to transmit a request for an allocation to the hub. Likewise, Heiman indicates “[i]n order to obtain an allocation, the active remote terminal makes at least one request through random access control bursts 705 on the return control channel 210 for an

⁴ Heiman at paragraph [0003].

⁵ Heiman at paragraph [0010].

⁶ Heiman at paragraph [0011].

⁷ Heiman at paragraph [0036].

allocation on the return data channel 205.”⁸ Thus, Heiman describes a method for allocating and utilizing a return channel for remote terminals that are already acquired by a communication system.

Accordingly, as discussed during the interview, Heiman fails to teach or suggest to “acquire a remote node that is not yet acquired by the hub in a satellite communication network,” and Heiman also fails to teach or suggest sending “a first acquisition command to the remote node that is not yet acquired to acquire the remote node to be added to the network,” as recited in Claim 12.

Accordingly, it is respectfully submitted that Claim 12 patentably defines over Heiman. In addition, for reasons similar to those discussed above, it is respectfully submitted that independent Claims 1, 8, 39, 23, 27, 32, 43, and 50, and claims depending therefrom, also patentably define over Heiman.

Therefore, it is respectfully requested the rejection of claims under 35 U.S.C. § 102(e) as anticipated by Heiman be withdrawn.

In addition, Applicants respectfully traverse the rejection of claims under 35 U.S.C. § 103(a) as being unpatentable over Heiman in view of Goldstein, Sakoda, Molnar, Doi, or Li. Those claims depend from the independent Claims 1, 8, 12, 39, 23, 27, 32, 43, and 50, which are believed to patentably define over Heiman as discussed above. Further, it is respectfully submitted that Goldstein, Sakoda, Molnar, Doi, and Li, whether taken individually or in combination, fail to teach or suggest the claimed features lacking in the disclosure of Heiman. Therefore, it is respectfully requested those rejections also be withdrawn.

Accordingly, Applicants respectfully submit that Claims 1-53 are allowable.

⁸ Heiman at paragraph [0037].

Consequently, in light of the above discussion and in view of the present amendment this application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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